

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

As a preliminary matter, Applicants note the Office Action's consideration of the Information Disclosure Statement filed on July 27, 2006.

Claim 10 stands rejected under 35 U.S.C. § 112, ¶ 2 as being indefinite. Claims 8, 9 and 12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2002/0051902 to Suenaga et al. (hereinafter "Suenaga"). Claims 13 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Suenaga. Claims 10 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Suenaga in view of U.S. Patent Application Publication No. 2003/0041444 to Debe et al. (hereinafter "Debe").

By this amendment, claim 10 has been amended for clarity as discussed in greater detail below. Claims 8, 9 and 11-14 remain unchanged in the application.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier. After amending the claims as set forth above, claims 8-14 remain pending in this application for consideration.

Applicants respectfully submit that sole independent claim 8 and claims dependent therefrom, are patentably distinguishable over the cited reference as required by § 102. Applicants further submit that the cited reference fails to disclose Applicants' claimed manufacturing method for a polymer electrolyte fuel cell including the steps of: (1) *applying an adhesive to a surface of the first separator which contacts the first gas diffusion layer*; (2) *applying the adhesive to a surface of the second separator which contacts the second gas diffusion layer*; (3) *disposing the first separator, the first gas diffusion layer, the polymer electrolyte membrane, the second gas diffusion layer, and the second separator between a pair of pressing jigs so as to be laminated in the described sequence*; and (4)

obtaining an integrated fuel cell by applying heat and pressure to the first separator and the second separator using the pressing jigs as required by independent claim 8. By contrast, the cited reference fails to disclose these claimed steps. Accordingly, independent claim 8 and claims dependent therefrom are patentably distinguishable over the cited reference. This distinction will be further described below.

THE CLAIMS COMPLY WITH 35 U.S.C. § 112, ¶ 2

Claim 10 stands rejected as being indefinite. In particular, the Office Action alleges that claim 10 is incomplete for omitting essential steps amounting to a gap between the steps. Although Applicants are of the opinion that claim 10 is in fact definite and is not missing any essential steps, Applicants have taken the opportunity to amend claim 10 to remove any ambiguity that may have existed in the claim in order to expedite prosecution of the present application. For this reason, Applicants respectfully submit that claim 10, as presented, is in full compliance with 35 U.S.C. § 112, ¶ 2 and respectfully request withdrawal of the outstanding rejection.

THE CLAIMS DISTINGUISH OVER THE CITED REFERENCE

Claims 8, 9 and 12 stand rejected as being anticipated by Suenaga. In response, Applicants traverse the rejection and respectfully submit that the claims are allowable at least for the reasons that follow.

Applicants rely on MPEP § 2131, entitled “Anticipation – Application of 35 U.S.C. 102(a), (b), and (e),” which states that a “claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Section 103 amplifies the meaning of this anticipation standard by pointing out that anticipation requires that the claimed subject matter must be “*identically* disclosed or described” by the prior art reference. (Emphasis added.) It is respectfully submitted that Suenaga does not describe each and every element of any of the claims.

Although both Applicants’ claimed invention and Suenaga relate generally to fuel cells, the two address two different problems and, not surprisingly, describe different solutions. Suenaga is concerned with problems created by mounting seals in a membrane

electrode assembly (*Suenaga*, paragraph 11, lines 1-4). Conventionally seals made from organic rubbers are used instead of seals made from carbon or ceramics since rubber seals are flexible and have a suitable reaction force which prevents breakage of the separator plate in the assembly of a fuel cell stack, as compared with seals made from carbon or ceramics (paragraph 7, lines 1-10 and paragraph 8, lines 1-8). The rubber seal, however, needs to be charged into a cavity formed in a die requiring high temperatures and pressure which adversely affects the electrolyte membrane and the electrode plate (paragraph 10, lines 9-16). To address these problems, *Suenaga* discloses forming in advance, the seal into a predetermined shape, setting the seal at the mounting portion of the membrane electrode assembly and integrally forming the seal with the membrane electrode assembly (paragraph 12, lines 10-13). As clearly illustrated in FIG. 3A, *Suenaga* teaches that to coat an adhesive 50 on the close-contacting surface 15 of the seal 10A, in hot pressing, the close-contacting surface 15 is adhered to the electrolyte membrane 23 via the adhesive 50 and the seal 10A is integrally mounted to the membrane electrode assembly 20 (paragraph 45, lines 1-7). Thus, *Suenaga* teaches the integration of the electrolyte membrane 23, the electrode plates 21 and 22A and the seal 10A.

Unlike *Suenaga*, Applicants' claimed invention is not directed to the problems associated with using seals made from organic rubbers, but rather is directed to the problems associated with the manufacturing process of a polymer electrolyte fuel cell (*Specification*, page 2, lines 6 and 7). Accordingly, one embodiment of the present invention is directed to a manufacturing method for a polymer electrolyte fuel cell. The method includes the following steps: (1) *applying an adhesive to a surface of the first separator which contacts the first gas diffusion layer*; (2) *applying the adhesive to a surface of the second separator which contacts the second gas diffusion layer*; (3) *disposing the first separator, the first gas diffusion layer, the polymer electrolyte membrane, the second gas diffusion layer, and the second separator between a pair of pressing jigs so as to be laminated in the described sequence*; and (4) *obtaining an integrated fuel cell by applying heat and pressure to the first separator and the second separator using the pressing jigs*. Performing these steps shortens the manufacturing process of the polymer electrolyte fuel cell (page 2, lines 6 and 7). As illustrated in FIG. 4 of the present application, the method integrates all of the components

of the fuel cell (i.e., the polymer electrolyte membrane (5), the gas diffusion layers (6A and 6B) and the separators (7A and 7B)) through a process of applying heat and pressure to the first separator 7A and the second separator 7B using the pressing jigs (page 4, lines 1-12 and page 9, line 16 through page 10, line 13).

The Suenaga reference mentions nothing about the integration of the separators. In addition, the Suenaga reference fails to teach the steps of: (1) *applying an adhesive to a surface of the first separator which contacts the first gas diffusion layer*; (2) *applying the adhesive to a surface of the second separator which contacts the second gas diffusion layer*; (3) *disposing the first separator, the first gas diffusion layer, the polymer electrolyte membrane, the second gas diffusion layer, and the second separator between a pair of pressing jigs so as to be laminated in the described sequence*; and (4) *obtaining an integrated fuel cell by applying heat and pressure to the first separator and the second separator using the pressing jigs*. Contrary to the Examiner's comments found on page 3 of the outstanding Office Action, these steps are simply not performed in Suenaga. For example, there are no jigs disclosed in Suenaga. As such, the reference fails to disclose placing the elements of the fuel cell between a pair of pressing jigs so as to be laminated in the describe sequence. For anticipation, however, "every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim." *Brown v. 3M*, 60 USPQ2d 1375 (Fed. Cir. 2001). Suenaga fails to disclose each of the features of independent claim 8. The Debe reference also fails to disclose these claimed steps and was not cited for that purpose.

In view of the fact that the Suenaga reference does not disclose each of the claimed stepss indicated above, this reference cannot be said to anticipate nor can it be said to render obvious the invention which is the subject matter of independent claim 8. Thus, independent claim 8 is allowable.

Since independent claim 8 is allowable, claims dependent therefrom, namely claims 9-14 are also allowable by virtue of their direct or indirect dependence from allowable independent claim 8 and for containing other patentable features. Further remarks regarding the asserted relationship between any of the claims and the cited reference are not necessary

in view of their allowability. Applicants' silence as to the Office Action's comments is not indicative of being in acquiescence to the stated grounds of rejection.

CONCLUSION

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date February 21, 2008

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